AVIATION FUEL TANKERING IN AN ENVIRONMENTALLY SUSTAINABLE CONTEXT

Peter O'Reilly, Fabricio Sulzbacher, Diogo Coutinho, Maria Petrescu
Embry-Riddle Aeronautical University, Gol Linhas Aéreas

*** Corresponding author e-mail address**: oreillyp@erau.edu

PAPER ID: SIT159

ABSTRACT

There are currently multiple global programs related to carbon taxes and carbon offsetting, such as EU-ETS in Europe, National Chinese ETS in China, and ICAO's CORSIA for aviation-related emissions. On the other hand, Brazil is considered an unregulated carbon market. The carbon credit purchase has been transitory, although a tangible measure for the aviation industry while more definite and expensive projects have received proper incentives to become economically attractive, such as biofuels. However, each state applies its tax rates in the Brazilian fuel scenario, named ICMS. The objectives of this paper focus on assessing the total fuel tankering quantity data used by the Brazilian airline industry, explaining the total carbon emissions related to fuel tinkering, and appraising the average cost of carbon to neutralize this practice by purchasing carbon credits. The manuscript also provides recommendations about support solutions for the adjustment of savings incorporating the neutralization of carbon emissions and a comparison of the Brazilian fuel tankering situation against the global scenario. The study highlights that the Brazilian aviation industry can sustainably neutralize the carbon emissions from the fuel tankering practice. As shown in the study, the fuel tankering practice has been highly profitable. Although the political aspects have not been the primary purpose of this study, the difference in ICMS taxes has made the aviation industry less efficient and more polluter. Our recommendation aims to level the state taxes to reduce the airlines' need to apply procedures that negatively affect the environment. Implementing carbon emission compensation/neutralization policies in the Brazilian aviation market using part of the financial savings obtained with the fuel tankering practice.

Keywords: Fuel Tankering, Carbon Mission Neutralization, Carbon Credits